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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/673,210	09/30/2003	Kang Soo Seo	1740-000059/US	9596
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HARNESS, DICKEY & PIERCE, P.L.C. P.O. BOX 8910 RESTON, VA 20195			EXAMINER ZHAO, DAQUAN	
			ART UNIT 2621	PAPER NUMBER
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/673,210	<b>Applicant(s)</b> SEO ET AL.	
	<b>Examiner</b> DAQUAN ZHAO	<b>Art Unit</b> 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 04 November 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,8-11 and 24-48 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,8-11 and 24-48 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>11/4/2009</u> .   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments with respect to claims 1, 8-11, and 24-48 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 101***

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1, 8, 10, 24-25, 27,29-30, 32, 34-35, 37, 39-40, 42, 44-45, 47 are rejected under 35 U.S.C. 101 because claims are directed to nonstatutory subject matter.

For claim 1, "In the start of the art, transitory signals are commonplace as a medium for transmitting computer instruction and thus, in the absence of any evidence to the contrary and give the broadest reasonable interpretation, the scope of a "computer readable medium' covers a signal per se." In order to overcome the 35 U.S.C. 101 rejection, the "recording medium" should be changed to "non-transitory recording medium".

Claims 8 and 10 are tie to a "recording medium". In order to overcome the 35 U.S.C. 101 rejection, the "recording medium" should be changed to "non-transitory recording medium".

Claims 24-25, 27,29-30, 32, 34-35, 37, 39-40, 42, 44-45, 47 are also effected.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 8-11 and 24-48 rejected under 35 U.S.C. 103(a) as being unpatentable over Kim (US 6,754,435 B2), hereinafter referenced as Kim, and further in view of Digital Video Broadcasting (DVB) Subtitling System (a copy of this document is attached, or Google.com: keywords: digital video broadcasting subtitling system), hereinafter referenced as DVB Standard, Kato et al (US 7,236,687 B2) and further in view of Ishii et al (US 6,546,188 B1).

For claim 1, Kim teaches a computer readable medium storing a data structure for managing reproduction of graphic data by a reproducing apparatus (e.g. abstract, figures 13, and 14), comprising: a data area storing graphic segments containing a graphic image for overlay on main video data (e.g. column 7, line 61- column 8, lines 8, caption or subtitle data is overlay on the video data on the display), the graphic segments multiplexed into a main video stream including the main video data (e.g. figure 4, column 3, lines 52-67, the sub-picture data or caption data is multiplexed with the video data).

However, Kim fails to teach a plurality of transport packets representing one or more graphic segments containing a graphic image; the transport packets in the one or more graphic segments have a same packet identifier (PID), at least one transport

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packet in the one or more graphic segments includes position information defining a position for the reproducing apparatus to display the graphic images, and at least one transport packet in the one or more graphic segments includes a time stamp of the graphic images.

DVB standard teaches a plurality of transport packets representing one or more graphic segments containing a graphic image; the transport packets in the one or more graphic segments have a same packet identifier (PID) (e.g. page 8, “transport packet stream” and page 10, a subtitle stream carries a single transport packet stream, wherein the transport packet stream contains a subset of transport packets and shares a common packet identifier, PID; the subtitle stream corresponds to the claimed “one or more graphic segments” ), at least one transport packet in the one or more graphic segments includes position information defining a position for the reproducing apparatus to display the graphic images (e.g. page 8: page composition, and page 17, syntax for page composition segment which contains a “region horizontal address” and “region vertical address”, and pages 39 to 43 shows how all the subtitle are overlaying on the video data on the screen), and at least one transport packet in the one or more graphic segments includes a time stamp of the graphic images (e.g. page 35, A.3.1 presentation time stamps).

It would have been obvious to one ordinary skill in the art at the time of the invention was made to incorporate the teaching of the DVB standard into teaching of Kim to record or reproduce the subtitle stream in the DVD of Kim according to the DVB standard to provide efficient use of the display memory (DVB standard, page 9).

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Kim et al and DVB standard fail to teach source packets of transport stream, each of the source packets including a transport packet extra header

Kato et al teach source packets of transport stream, each of the source packets including a transport packet extra header (e.g. column 34, lines 25-47). It would have been obvious to one ordinary skill in the art at the time the invention was made to incorporate the teaching of Kato et al into the teaching of Kim et al and DVB standard to improve the ability of the system for copy protection.

Kim et al, DVB standard and Kato et al fail to teach reproduction information for controlling display effect of the graphic image, the display effect being at least one of the fade effect and wipe effect. Ishii et al teach reproduction information for controlling display effect of the graphic image, the display effect being at least one of the fade effect and wipe effect (e.g. column 59, lines 5-29, effects set-up must have controlling information for the wipe and fade effect). It would have been obvious to one ordinary skill in the art at the time the invention was made to incorporate the teaching of Ishii et al into the teaching of Kim et al, DVB standard and Kato et al to improve useability, which realizes special effects while also realizing high-speed real time editing (e.g. Ishii et al column 1, lines 50-54).

For claims 44-48, Kato et al teach the transport packet extra header includes copy protection information and arrival time stamp (e.g. column 34, lines 25-51).

Claims 8 and 10 are rejected for the same reasons as discussed in claim 1 above.

Claim 9 is rejected for the same reasons as discussed in claim 1 above, wherein Kim teaches an optical reproducing device configured to reproduce data recorded on the recording medium; a controller configured to control the optical reproducing device to reproduce from the recording medium (e.g. figure 9, micro-computer 11).

Claim 11 is rejected for the same reasons as discussed in claim 1 above, wherein Kim teaches in column 1, lines 27-35, the video data is recorded on the DVD. Therefore, there must be an optical recording device, an encoder and a controller to record the video data on the DVD.

For claims 24-28, DVB standard teaches at least one transport packet in the one or more graphic segments includes information on presentation time to display the graphic image, and duration to display the graphic images (e.g. page 35, A.3.1. Presentation Time Stamps (PTS), The PTS controls when the subtitle data is display, page 41 teaches the subtitle data “toward the twenty-first century this” and “month when it purchased a robot” are display at different time. Therefore the PTS has to control the duration of the display of the subtitle data since, for example the subtitle data “toward the twenty-first century this” can’t stay on the screen forever).

For claims 29-33, Kim teaches a playlist including navigation information for playback control of the main video stream (e.g. figure 6 shows the Navigation data, column 4, lines 21-28, the program chain information is consider to be the playlist information).

For claims 34-38, Kim teaches a graphic mark indexing the graphic image (e.g. column 5, lines 45-61, the “sub-picture search table” index the sub-picture data location).

For claims 39-43, Kim teaches information specifying display start time and end times of the graphic image (e.g. column 8, lines 1-8, the caption data are lined to the moving picture data falling into a predetermined period of time, therefore, the subtitle has to have a start time and end time according the reproduction time of the video data. The examiner recognizes the reproduction time is controlled by the Presentation Time Stamp in the DVB Standard or in the conventional DVD standard) and the DVB Standard teaches the display position and window size of the graphic image on the main video data (e.g. page 8: page composition, and page 17, syntax for page composition segment which contains a “region horizontal address” and “region vertical address”, and pages 39 to 43 shows how all the subtitle are overlaying on the video data on the screen, The size and position of the display windows A, B and C of pages 39-43 has to be defined by the “page composition”).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daquan Zhao whose telephone number is (571) 270-1119. The examiner can normally be reached on M-Fri. 7:30 -5, alt Fri. off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Tran Thai Q, can be reached on (571)272-7382. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Daquan Zhao/  
Examiner, Art Unit 2621

/Thai Tran/  
Supervisory Patent Examiner, Art Unit 2621